SmartWatch® IP PTZ Dome Cameras

Manual

H20IPSD302 / H20IPSDIR302

Thank you for purchasing our product. If there are any questions, or requests, please do not hesitate to contact your distributor.

This manual applies to the SmartWatch H20IPSD302 & H20IPSDIR302 IP PTZ dome cameras.

This manual may contain several technical or printing errors, and the content is subject to change without notice. The updates will be added to the new version of this manual. The pictures in the manual are for reference only. We will readily improve or update the products or procedures described in the manual.

DISCLAIMER STATEMENT

"Underwriters Laboratories Inc. ("UL") has not tested the performance or reliability of the security or signaling aspects of this product. UL has only tested for fire, shock or casualty hazards as outlined in UL's Standard(s) for Safety, UL60950-1. UL Certification does not cover the performance or reliability of the security or signaling aspects of this product. UL MAKES NO REPRESENTATIONS, WARRANTIES OR CERTIFICATIONS WHATSOEVER REGARDING THE PERFORMANCE OR RELIABILITY OF ANY SECURITY OR SIGNALING RELATED FUNCTIONS OF THIS PRODUCT."

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Regulatory Information

FCC Information

FCC compliance: This equipment has been tested and found to comply with the limits for a digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Conditions

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.

2. This device must accept any interference received, including interference that may cause undesired operation.

EU Conformity Statement

This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the Low Voltage Directive 2006/95/EC, the EMC Directive 2004/108/EC, the RoHS Directive 2011/65/EU.

2012/19/EU (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: www.recyclethis.info.

2006/66/EC (battery directive): This product contains a battery that cannot be disposed of as unsorted municipal waste in the European Union. See the product documentation for specific battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or mercury (Hg). For proper recycling, return the battery to your supplier or to a designated collection point. For more information see: www.recyclethis.info.

Safety Instruction

These instructions are intended to ensure that the user can use the product correctly to avoid danger or property loss.

The precaution measure is divided into 'Warnings' and 'Cautions':

Warnings: Serious injury or death may be caused if any of these warnings are neglected.

Cautions: Injury or equipment damage may be caused if any of these cautions are neglected.

Warnings Follow these safeguards to prevent serious injury or death.	**Cautions** Follow these precautions to prevent potential injury or material damage.

 Warnings:

- Please use the power supply which can meet the safety extra low voltage (SELV) standard. The power consumption cannot be less than the required value.
- Do not connect several devices to one power supply as overload may cause over-heating and can be a fire hazard.
- When the product is installed on a wall or ceiling, the device should be firmly fixed.
- To reduce the risk of fire or electrical shock, do not expose the internal parts to rain or moisture.
- This installation should be made by a qualified service engineer and should conform to all the local standards.
- Please install a fused spur to the power supply circuit for convenient supply interruption.
- If the product does not work properly, please contact your distributor. Never attempt to disassemble the product yourself. (We shall not assume any responsibility for problems caused by unauthorized repair or maintenance.)

⚠️ **Cautions:**

- Make sure the power supply voltage is correct before using the product.
- Do not drop the product or subject it to physical shock. Do not install the product on vibratory surface or places.
- Do not expose it to high electromagnetic radiating environment.
- Do not aim the lens at the strong light such as sun or incandescent lamp. The strong light can cause fatal damage to the product.
- The sensor may be burned out by a laser beam, so when any laser equipment is being used, make sure that the surface of the sensor not be exposed to the laser beam.
- For working temperature, please refer to the specification manual for details.
- To avoid heat accumulation, good ventilation is required for a proper operating environment.
- While shipping, the product should be packed in its original packing.
- Please use the provided glove when open up the product cover. Do not touch the product cover with fingers directly, because the acidic sweat of the fingers may erode the surface coating of the product cover.
- Please use a soft and dry cloth when clean inside and outside surfaces of the product cover. Do not use alkaline detergents.

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Chapter 1 Overview

1.1 System Requirement

System requirement for web browser access is as follows:

Operating System: Microsoft Windows XP SP1 and above version / Vista / Win7 / Server 2003 / Server 2008 32bits

CPU: Intel Pentium IV 3.0 GHz or higher

RAM: 1G or higher

Display: 1024×768 resolution or higher

Web Browser: Internet Explorer 7.0 and above version, Apple Safari 5.02 and above version, Mozilla Firefox 5 and above version and Google Chrome8 and above versions.

1.2 Functions

NOTE The functions vary depending on the models of speed dome.

- **Limit Stops**

The dome can be programmed to move within the limit stops (left/right, up/down).

- **Scan Modes**

The dome provides 5 scan modes: auto scan, tilt scan, frame scan, random scan and panorama scan.

- **Presets**

A preset is a predefined image position. When the preset is called, the dome will automatically move to the defined position. The presets can be added, modified, deleted and called.

- **Label Display**

The on-screen label of the preset title, azimuth/elevation, zoom, time and dome name can be displayed on the monitor. The displays of time and speed dome name can be programmed.

- **Auto Flips**

In manual tracking mode, when a target object goes directly beneath the dome, the video will automatically flips 180 degrees in horizontal direction to maintain continuity of tracking.

- **Privacy Mask**

This function allows you to block or mask certain area of a scene, preventing recording or live viewing.

- **3D Positioning**

In the client software, use the left key of mouse to click on the desired position in the

video image and drag a rectangle area in the lower right direction, the dome will move the position to the center and allow the rectangle area to zoom in. Use the left key of mouse to drag a rectangle area in the upper left direction to move the position to the center and allow the rectangle area to zoom out.

● **Proportional Pan/Tilt**

Proportional pan/tilt automatically reduces or increases the pan and tilt speeds according to the level of zoom. At telephoto zoom settings, the pan and tilt speeds will be slower than at wide zoom settings. This keeps the image from moving too fast on the live view image when there is a large amount of zoom.

● **Auto Focus**

The auto focus enables the camera to focus automatically and maintain clear video images.

● **Day/Night Auto Switch**

The speed domes deliver color images during the day. And as light diminishes at night, the speed dome will switch to night mode and deliver black and white images with high quality.

● **Slow Shutter**

In slow shutter mode, the shutter speed will automatically slow down in low illumination conditions to maintain clear video images by extending the exposure time. This feature can be enabled or disabled.

● **Backlight Compensation (BLC)**

If you focus on an object against strong backlight, the object may be too dark. The BLC (Backlight Compensation) function can compensate light to the object in front to make it clear (this may cause the over-exposure of the background where the light is strong.)

● **Wide Dynamic Range (WDR)**

The wide dynamic range (WDR) function helps the camera provide clear images even under back light circumstances. When there are both very bright and very dark areas simultaneously in the field of view, WDR balances the brightness level of the image to provide clear images with details.

NOTE   This feature varies depending on speed dome models.

● **White Balance (WB)**

White balance can remove the unrealistic color casts. White balance is the white rendition function of the camera that will adjust the color temperature according to the environment automatically.

● **Patrol**

A patrol is a recording of pre-defined presets. The scanning speed between two presets and the dwell time at the preset are programmable.

● **Pattern**

A pattern is a recording of pan, tilt, zoom, and preset functions. By default the focus and iris are in auto mode when the pattern is being recorded.

● **Power Off Memory**

The dome supports a power off memory function. When power is restored the dome resumes its previous position.

- **Scheduled Task**

A time task is a programmed action that can be performed automatically at a specific date and time. The programmable actions include: auto scan, random scan, patrol 1-8 ,pattern 1-4, preset 1-8,frame scan, panorama scan, tilt scan, day, night, reboot, PT adjust, Aux Output, etc.

- **Park Action**

This feature allows the dome to start a preprogrammed action automatically after a preprogrammed time of inactivity.

- **User Management**

The dome allows you to program users with different levels of permissions. Multiple users can access and control the same network speed dome simultaneously.

- **3D Digital Noise Reduction**

The 3D digital noise reduction function processes the noise between two frames. The noise is removed making the video clearer.

Chapter 2 Network Connection

Before you start:
- If you want to configure the network speed dome via a LAN (Local Area Network), please refer to Section ***2.1 Setting the Network Speed Dome over the LAN***.
- If you want to configure the network speed dome via a WAN (Wide Area Network), please refer to Section ***2.2 Setting the Network Speed Dome over the WAN***.

2.1 Setting the Network Speed Dome over the LAN

Purpose:
To view and configure the speed dome via a LAN, you need to connect the network speed dome in the same subnet with your computer, and install the SmartWatch System Manager software to search and change the IP of the network speed dome.

2.1.1 Wiring over the LAN

The following two figures show how to connect the network speed dome to the computer:

Purpose:
- To test the network speed dome, you can directly connect the network speed dome to the computer with a network cable as shown in Figure 2-1.
- Refer to the Figure 2-2 to set the network speed dome over the LAN via a switch or a router.

Network Cable

Figure 2-1 Connecting Directly

Figure 2-2 Connecting via a Switch or a Router

2.1.2 Detecting and Changing the IP Address

You need the IP address to connect to the network speed dome.

Steps:

1. To get the IP address, you can use the SmartWatch System Manager software to list the online devices. Please refer to the user manual of client software for detailed information.
2. Change the IP address and subnet mask to the same subnet as that of your computer.
3. Enter the IP address of network speed dome in the address field of the web browser to view the live video.

- The default IP address is 192.0.0.64. The default user name is admin, and password is 12345.
- For accessing the network speed dome from different subnets, please set the gateway for the network speed dome after you logged in. For detailed information, please refer to Section ***6.3.1 Configuring TCP/IP Settings***.

2.2 Setting the Network Speed Dome over the WAN

Purpose:
This section explains how to connect the network speed dome to the WAN with a static IP or a dynamic IP.

2.2.1 Static IP Connection

Before you start:
Please apply for a static IP from an ISP (Internet Service Provider). With the static IP address, you can connect the network speed dome via a router or connect it to the WAN directly.

● **Connecting the network speed dome via a router**
Steps:
1. Connect the network speed dome to the router.
2. Assign a LAN IP address, the subnet mask and the gateway. Refer to Section *2.1.2 Detecting and Changing the IP Address* for detailed IP address configuration of the speed dome.
3. Save the static IP in the router.
4. Set port mapping, E.g., 80, 8000 and 554 ports. The steps for port mapping vary on different routers. Please call the router manufacturer for assistance with port mapping.

   NOTE Refer to Appendix 2 for detailed information about port mapping.
5. Connect to the network speed dome through a web browser or the client software over the internet.

Figure 2-3 Accessing the Speed Dome through Router with Static IP

END

● **Connecting the network speed dome with static IP directly**
You can also save the static IP in the speed dome and directly connect it to the internet without using a router. Refer to Section *2.1.2 Detecting and Changing the IP Address* for detailed IP address configuration of the speed dome.

Figure 2-4 Accessing the Speed Dome with Static IP Directly

2.2.2 Dynamic IP Connection

Before you start:

Please apply for a dynamic IP from an ISP. With the dynamic IP address, you can connect the network speed dome to a modem or a router.

● **Connecting the network speed dome via a router**

Steps:

1. Connect the network speed dome to the router.
2. In the speed dome configuration, assign a LAN IP address, the subnet mask and the gateway. Refer to Section *2.1.2 Detecting and Changing the IP Address* for detailed LAN configuration.
3. In the router, set the PPPoE user name, password and confirm the password.
4. Set port mapping. E.g. 80, 8000 and 554 ports. The steps for port mapping vary on different routers. Please call the router manufacturer for assistance with port mapping.

   NOTE Refer to Appendix 2 for detailed information about port mapping.

5. Apply a domain name from a domain name provider.
6. Configure the DDNS settings in the speed dome.
7. Connect to the speed dome via the applied domain name.

END

● **Connecting the network speed dome via a modem**

Purpose:

This speed dome supports the PPPoE auto dial-up function. The speed dome gets a public IP address by ADSL dial-up after the speed dome is connected to a modem. You need to configure the PPPoE parameters of the network speed dome. Refer to Section *6.3.3 Configuring PPPoE Settings* for detailed configuration.

Figure 2-5 Accessing the Speed Dome with Dynamic IP

NOTE The obtained IP address is dynamically assigned via PPPoE, so the IP address always changes after rebooting the speed dome. To solve the inconvenience of the dynamic IP, you need to get a domain name from the DDNS provider (E.g. DynDns.com). Please follow below steps for normal domain name resolution and private domain name resolution to solve the

problem.

◆ Normal Domain Name Resolution

Figure 2-6 Normal Domain Name Resolution

Steps:

1. Apply a domain name from a domain name provider.
2. Configure the DDNS settings in the **DDNS Settings** interface of the network speed dome. Refer to Section *6.3.4 Configuring DDNS Settings* for detailed configuration.
3. Visit the speed dome via the applied domain name.
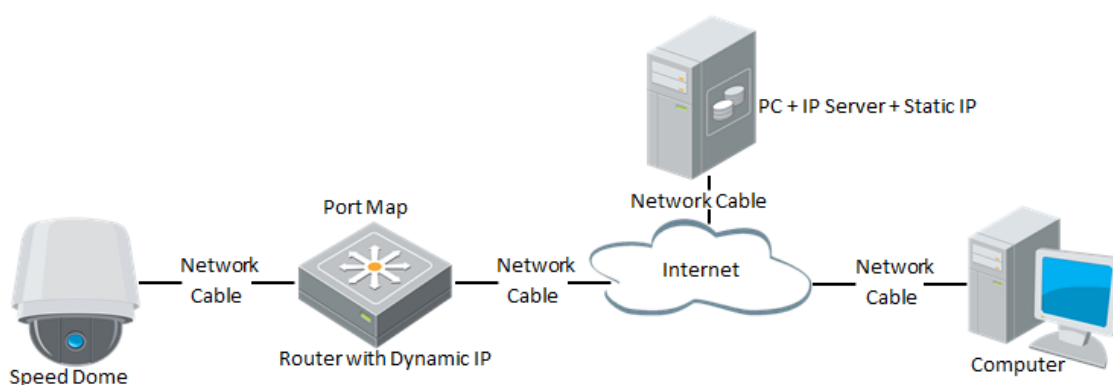

◆ Private Domain Name Resolution

Figure 2-7 Private Domain Name Resolution

Steps:

1. Install and run the IP Server software on a computer with a static IP.
2. Access the network speed dome through the LAN with a web browser or the client software.
3. Enable DDNS and select IP Server as the protocol type. Refer to Section *6.3.4 Configuring DDNS Settings* for detailed configuration.

Chapter 3 Access to the Network Speed Dome

3.1 Accessing by Web Browsers

Steps:

1. Open the web browser.
2. In the address field, input the IP address of the network speed dome, e.g., 192.0.0.64 and press the **Enter** key to enter the login interface.
3. Select English as the interface language on the top-right of login interface.
4. Input the user name and password and click [Login].

NOTE The default user name is admin, password is 12345.

Figure 3-1 Login Interface

5. Install the plug-in before viewing the live video and operating the speed dome. Please follow the installation prompts to install the plug-in.

Figure 3-2 Download and Install Plug-in

Figure 3-3 Install Plug-in (2)

Figure 3-4 Install Plug-in (3)

NOTE You may have to close the web browser to install the plug-in. Please reopen the web browser and log in again after installing the plug-in.

3.2 Accessing by Client Software

The product CD contains the SmartWatch System Manager software. SmartWatch System Manager will allow you to view the live video and manage the speed dome with the client software.

Follow the installation prompts and install the client software and WinPcap. The configuration interface and live view interface of client software are displayed below.

Figure 3-5 SmartWatch System Manager Software Control Panel

NOTE

● For detailed information about SmartWatch System Manager software, please refer to the software user manual.

Chapter 4 Live View

4.1 Live View Page

Purpose:
The live video page allows you to view live video, capture images, PTZ control, set and call presets and configure the video parameters.
Log in to the network speed dome to enter the live view page.

Descriptions of the live view page:

Figure 4-1 Live View Page

Menu Bar:
Click the tab to enter the Live View, Playback, Log and Configuration page.
Live View Window:
Displays the live video.
Toolbar:
Operations on the live view page, e.g., live view, capture, record, audio on/off, two-way audio, etc.
PTZ Control:
For pan, tilt & zoom of the speed dome.
Preset/patrol/pattern:
Set and call the presets/patrols/patterns of the speed dome.
Live View Parameters:
To set the image size and stream type of the live video.

4.2 Starting Live View

In the live view window as displayed in Figure 4-2, click ▶ on the toolbar to start the live view video from the speed dome.

Figure 4-2 Live View

Table 4-1 Descriptions of the Toolbar

Icon	Description	Icon	Description
■ / ▶	Live view on/off	📷	Manually capture image
/	Manual recording off / on	🔊 — / 🔇	Audio on and adjust volume / Mute
🎤 / 🎤	Two-way audio off/on	⊕³ᴰ	3D zoom

NOTE To use two way audio please set the **Stream Type** to **Video & Audio** - see Section *6.4.1 Configuring Video Settings*.

Full-screen Mode:
Double-click on the live video image to toggle the current live view into full-screen / normal mode.

3D Positioning:

Steps:

1. Click on the tool bar.

2. Operate the 3D positioning function:
    - Left click a position of the live video.
    - Hold down the left mouse button and drag the mouse to the lower right. The camera will move and zoom in on this position.
    - Hold down the left mouse button and drag the mouse to the upper left. The camera will move to this position and move out.

4.3 Recording and Capturing Pictures Manually

On live view, click on the toolbar to capture the live image or click to record live video. The local saving paths of the captured pictures and clips can be set in the **Configuration > Local Configuration** interface.

To configure remote automatic recording, please refer to Section *7.2 Configuring Recording Schedule*.

4.4 Operating PTZ Control

Purpose:

On the live view screen, you can use the PTZ control buttons to control pan, tilt and zoom.

4.4.1 PTZ Control Panel

On the live view page, click to display the PTZ control panel.   To hide the PTZ control panel, click .

Click the directional buttons to control the pan/tilt positions.
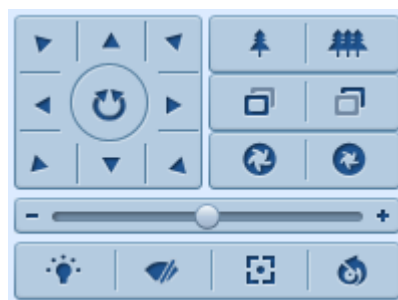Click the zoom/iris/focus buttons for lens control.

Figure 4-3 PTZ Control Panel

Table 4-2 Descriptions of PTZ Control Panel

Button	Description
	Zoom in/out
	Focus near/far
	Iris Open/Close
	Adjust pan/tilt speed

4.4.2 Setting / Calling a Preset

Purpose:
A preset is a predefined image position.

● **Setting a Preset:**
Steps:
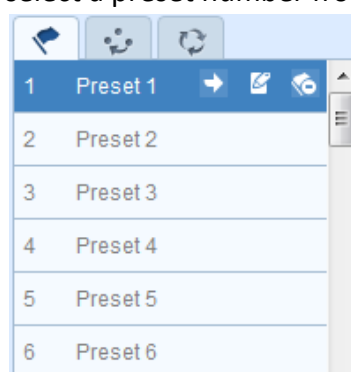1. In the PTZ control panel, select a preset number from the preset list.

Figure 4-4 Setting a Preset

2. Use the PTZ control buttons to move the camera & lens to the required position.
   • Pan the speed dome to the right or left.
   • Tilt the speed dome up or down.
   • Zoom in or out.
   • Refocus the lens.

3. Click ![icon] to finish the setting of the current preset.
4. Click ![icon] to delete the preset.

![NOTE] You can configure up to 256 presets.

![END]

● **Calling a Preset:**

In the PTZ control panel, select a defined preset from the list and click ![icon] to call the preset.
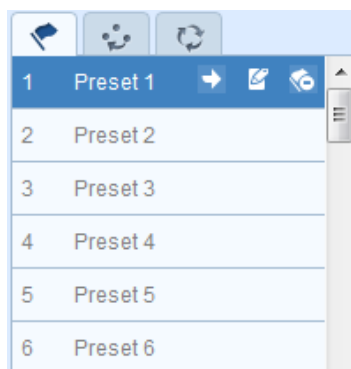

Figure 4-5 Calling a Preset

Presets can be called by:

1. Selecting the preset from the list.
2. Selecting the preset number you require on the keyboard.

![END]

![NOTE] The following are predefined presets with preprogrammed commands. You cannot configure them. For example, preset 99 is the "Start auto scan". If you call the preset 99, the speed dome starts auto scan function.

Table 4-3 Special Presets

Special Preset	Function	Special Preset	Function
33	Auto flip	93	Set limit stops manually
34	Back to initial position	94	Remote reboot
35	Call patrol 1	96	Stop a scan
36	Call patrol 2	97	Start random scan
37	Call patrol 3	98	Start frame scan
38	Call patrol 4	99	Start auto scan
39	IR cut filter in	100	Start tilt scan
40	IR cut filter out	101	Start panorama scan
41	Call pattern 1	102	Call patrol 5
42	Call pattern 2	103	Call patrol 6
43	Call pattern 3	104	Call patrol 7

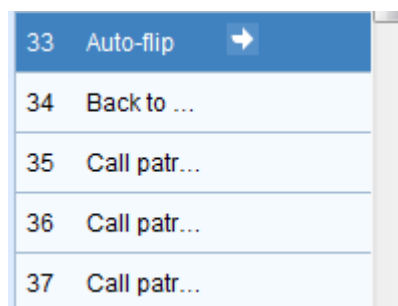| Special Preset	Function	Special Preset	Function
44	Call pattern 4	105	Call patrol 8
45	One-touch patrol		
92	Start to set limit stops		

Figure 4-6 Special Preset

NOTE   When you calling preset 45 (one-touch patrol), the speed dome patrols from preset 1 to 32. Before you enable this function, please configure preset 1 to 32.

4.4.3 Setting / Calling a Patrol

Purpose:

A patrol is a memorized series of presets. It can be configured and run in the patrol settings page. There are 8 patrols that can be configured. A patrol can be configured with 32 presets.

●   **Setting a Patrol:**
Steps:

1. In the PTZ control panel, click   to enter the patrol settings page.

2. Select a patrol number   Path 01   .
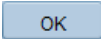
3. Click   to enter a preset.

Figure 4-7 Adding Presets

4. Configure the preset number, patrol time and patrol speed.

Name	Description
Patrol Time	It is the duration staying at the preset point.
Patrol Speed	The speed from one preset to another.

5. Click [OK] to save the preset to the patrol.

6. Repeat steps 3 to 5 to add additional presets.
7. Click 🖫 to save the patrol settings.

[END]

● **Calling a Patrol:**

In the PTZ control panel, select a patrol from the dropdown list and click ▶ to start the patrol as shown in Figure 4-8.
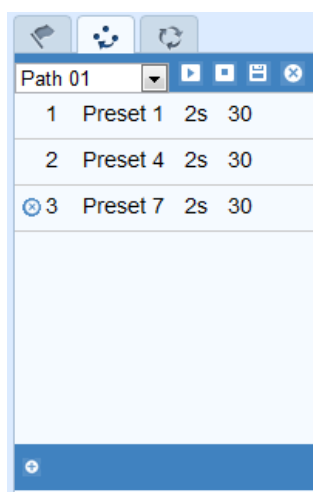

Figure 4-8 Calling a Preset

- **Buttons on the Patrols interface:**

Buttons	Description
💾	Save patrol
▶	Call patrol
■	Stop patrol
⊕	Enter a preset
✎	Modify a preset
⊗	Delete a preset
⊗	Delete all presets in one patrol

4.4.4 Setting / Calling a Pattern

Purpose:

A pattern is a memorized series of pan, tilt, zoom, and preset functions. It can be called on the pattern settings page. You can configure 4 patterns.

- **Setting a Pattern:**

Steps:

1. In the PTZ control panel, click [↻] to enter the pattern config page.

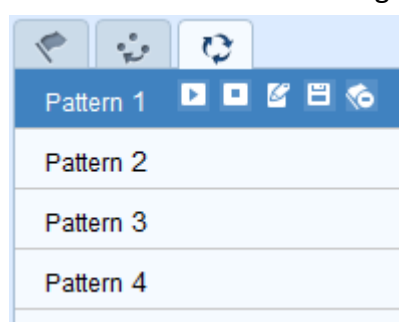2. Select a pattern number from the list as shown in Figure 4-9.

Figure 4-9 Patterns Settings Interface

3. Click ✎ to enable recording the pan, tilt and zoom.

4. Use the PTZ control buttons to move the camera to the desired position. **Pattern Record Remaining Memory (%)** will be displayed on the screen.
   - Pan the speed dome to the right or left.
   - Tilt the speed dome up or down.
   - Zoom in or out.
   - Refocus the lens.

5. Click 💾 to save all the pattern settings.

END

- **Controls on the Patterns page:**

Buttons	Description
✎	Start to record a pattern.
💾	Stop recording a pattern.
▶	Call the current pattern.
■	Stop the current pattern.
🗑	Delete the current pattern.

4.5 Configuring Live View Parameters

- **Main stream/Sub-stream:**

You can select Main Stream or Sub Stream for live viewing. The main stream is normally a relatively high resolution and will use more bandwidth. The sub-stream is a lower resolution and uses less bandwidth. The default setting of stream type is Main Stream.

NOTE Please refer to Section **6.4.1 Configuring Video Settings** for more detailed parameter settings of the main stream and sub-stream respectively.

- **Image Size:**

You can scale up/down the live image by clicking 4:3 16:9 ×1 🔲. the image size can be 4:3, 16:9, original or auto.

Chapter 5 PTZ Configuration

5.1 Configuring Initial Position

Purpose:

The initial position is the home position of the PTZ.

● **To Customize an Initial Position:**

Steps:

1. Enter the Initial Position Configuration page:

   Configuration > **Advanced Configuration** > **PTZ** > **Initial Position**

Figure 5-1 PTZ Configuration

2. Click the PTZ control buttons and go to the initial position.

3. Click [Set] to save the position.

[END]

● **Call/delete an Initial Position:**

Click [Goto] to call the initial position. Click [Clear] to delete the initial position.

5.2 Configuring Basic PTZ Parameters

To configure the basic PTZ parameters, proportional pan, preset freezing, preset speed, etc.

1. Enter the Basic PTZ Parameter Configuration page:
   Configuration > **Advanced Configuration** > **PTZ** > **Basic**

Figure 5-2 Basic PTZ Configuration Interface

2. Configure the following settings:
- **Basic Parameters:** Enable/disable proportional pan and preset freezing, set the preset speed, keyboard control speed, and auto scan speed.
   - ◆ **Proportional Pan:** If you enable this function, the pan/tilt speeds change according to the amount of zoom. When there is a large amount of zoom, the pan/tilt speed will be slower to keep the image from moving too fast in live view.
   - ◆ **Preset Speed:** You can set the speed of a defined preset from 1 to 8.
   - ◆ **Keyboard Control Speed:** Define the speed of PTZ control from a keyboard: Low, Normal or High.
   - ◆ **Auto Scan Speed:** The dome provides 5 scan modes: auto scan, tilt scan, frame scan, random scan and panorama scan. The scan speed can be set from level 1 to 40.
   - ◆ **Max**. **Tilt-angle**: The Max. angle that the speed dome can revolve in the tilt direction is adjustable. The values are (0-90), (-1-90), (-2-90), (-3-90), (-4-90) and (-5-90).
   - ◆ **Auto Flip**: You can enable/disable the auto flip function.
   - ◆ **Zooming Speed**: The speed of the zoom operation.
- **PTZ OSD:** Set the on-screen display duration.
   - ◆ **Zoom Status:** Set the OSD duration of zooming status as 2 seconds, 5 seconds, 10 seconds, Always Close or Always Open.
   - ◆ **PT Status:** Set the azimuth angle display duration while panning and tilting: 2 seconds, 5 seconds, 10 seconds, Always Close or Always Open.
   - ◆ **Preset Status:** Set the preset name display duration while calling the preset: 2

seconds, 5 seconds, 10 seconds, Always Close or Always Open.

● **Power-off Memory:** The dome can resume its previous PTZ status or actions after it restarted from a power-off. You can set the time point of which the dome resumes its PTZ status. You can set it to resume the status of 30 seconds, 60 seconds, 300 seconds or 600 seconds before power-off.

3. Click [Save] to save the settings.

[END]

5.3 Configuring PTZ Limit Stops

Purpose:
The dome can be programmed to move within the configurable limit stops (left/right, up/down).
Steps:
1. Enter the Limit Configuration page:
   Configuration > **Advanced Configuration** > **PTZ** > **Limit**

Figure 5-3 Configure the PTZ Limit

2. Click the **Enable Limit** checkbox and select the limit type as manual stops or scan stops.
   ● **Manual Stops:**
   When manual limit stops are set, you can operate the PTZ control panel manually only in the limited surveillance area.
   ● **Scan Stops:**
   When scan limit stops are set, the random scan, frame scan, auto scan, tilt scan, panorama scan is performed only within the limited surveillance area.

3. Click the PTZ control buttons to find the left/right/up/down limit stops.
4. Click **Set** to save the limits or click **Clear** to clear the limits.

⌈END⌉

5.4 Configuring Scheduled Tasks

Purpose:

You can configure the network speed dome to perform certain actions automatically in a user-defined time period.

Steps:

1. Enter the Scheduled Task Settings page:

   Configuration> Advanced Configuration> PTZ > Scheduled Tasks

Figure 5-4 Scheduled Tasks Configuration

2. Check the checkbox **Enable Scheduled Task**.
3. Set the **Park Time**. You can set the park time (a period of inactivity) before the dome starts the scheduled tasks.
4. Configure the schedule and task details.

   Steps:

   (1) Click [Edit Tasks] to edit the task schedule.

Figure 5-5 Edit the Schedule and Task Type

(2) Select the day you want to set the scheduled task.
(3) **All Day** to set the schedule for all day; or click **Customize** and input the **Start Time** and **End Time** for each task, click **Enter** on your keyboard to enter the time.
(4) Select the task type from the drop-down list. You can select scan, preset, pattern etc.

Figure 5-6 Task Types

(5) After you have configured the scheduled task, you can copy the task quickly to other days.

(6) Click [OK] to save the settings.

NOTE Time of task can't be overlapped. A maximum of 10 tasks can be configured for each day.

5.   Click [Save] to save the settings.

5.5 Configuring Park Actions

Purpose:

This feature allows the dome to start a predefined park action (scan, preset, pattern etc.) automatically after a period of inactivity (park time).

Steps:

1. Enter the Park Action Settings config page:

    Configuration > **Advanced Configuration**> **PTZ > Park Action**

Figure 5-7 Set the Park Action

2. Check the box **Enable Park Action**.
3. Set the **Park Time** inactivity time before the dome starts the park actions.
4. Select the **Action Type** the from the drop-down list.

Figure 5-8 Action Types

5. Click [Save] to save the settings.

5.6 Configuring Privacy Mask

Purpose:

Privacy mask enables you to mask certain areas on the live video from being viewed and recorded.

Steps:

1. Enter the Privacy Mask Settings config page:

Configuration > Advanced Configuration> PTZ > Privacy Mask

Figure 5-9 Draw the Privacy Mask

2. Put the PTZ in the area you want to set up the privacy masking in.

3. Click [Draw Area]; use the mouse to draw the area.

4. You can drag the corners of the red rectangle area to create a polygon mask.

5. Click [Stop Drawing] to finish drawing. Click [Clear All] to clear all of the areas you have set without saving them.

6. Click [Add] to save the privacy mask. This area will be listed in the **Privacy Mask List** area. To delete a mask and click [Delete].

Figure 5-10 Privacy Mask List

7. Check **Enable Privacy Mask** to enable this function.

[NOTE] Up to 2 areas can be created on the same image.

[END]

5.7 Clearing PTZ Configurations

Purpose:

To clear the PTZ configuration settings in this interface, enter this page:

Steps:

1. Enter the Clearing Configuration interface:

   Configuration > Advanced Configuration> PTZ > Clear Config

2. Check the checkbox of the items you want to clear.

3. Click [Save] to clear the settings.

Chapter 6 Speed Dome Configuration

6.1 Configuring Local Parameters

NOTE Local configuration refers to the parameters of live view and operations when using the web browser.

Steps:

1. Enter the Local Configuration interface:

    Configuration > Local Configuration

Figure 6-1 Local Configuration Interface

2. Configure the following settings:
*   **Live View Parameters:** Set the protocol type, stream type, image size and live view performance.
    *   **Protocol Type:** TCP, UDP, MULTICAST and HTTP are selectable.
    *   **Live View Performance:** Set the live view performance to Shortest Delay, Balanced or Best Fluency.

    NOTE Please set Live View Performance to Best Fluency for high frame rates.

    *   **Rules:** To enable or disable dynamic analysis for motion detection.
    *   **Image Format:** The captured images can be saved in different formats. JPEG and BMP are available.
*   **Record File Settings:** Set the saving path for recorded video files.
    *   **Record File Size:** Select the max file size for manually recorded and downloaded video files. This size can be set to 256M, 512M or 1G.
    *   **Save record files to:** Set the saving path for manually recorded video files.

♦ **Save downloaded files to:** Set the saving path for downloaded video files in [Playback] interface.

● **Picture and Clip Settings:** Set the saving paths for the captured pictures and clipped video files.

♦ **Save snapshots in live view:** Set the saving path for manually captured pictures in [Live View] mode.

♦ **Save snapshots when playback to:** Set the saving path for the captured pictures in [Playback] mode.

♦ **Save clips to:** Set the saving path for the clipped video files in [Playback] interface.

NOTE You can click [Browse] to change the directory.

3. Click [Save] to save the settings.

END

6.2 Configuring Time Settings

Purpose:
Follow the instructions in this section to configure the time that is displayed on the video. There are Time Zone, Time Synchronization, Daylight Saving Time(DST) functions for setting the time. Time Synchronization consists of auto mode by Network Time Protocol(NTP) server and manual mode.

To enter the Time Settings config page:
> **Configuration > Basic Configuration > System > Time Settings**
> Or **Configuration > Advanced Configuration > System > Time Settings**

Figure 6-2 Time Settings

● **Configuring Time Synchronization by NTP Server**

Steps:

(1) Check the **NTP** function.

(2) Configure the following settings:

Server Address: IP address of NTP server.

NTP Port: Port of NTP server.

Interval: The time interval between synchronizing. This can be set from 1 to 10080 minutes.

NOTE If the speed dome is connected to a public network, you should use a NTP server that has time synchronization function, for example the National Time Center (IP Address: 210.72.145.44). If the speed dome is set in a local network, NTP software can be used to establish as an NTP server for time synchronization.

END

● **Configuring Time Synchronization Manually**

Steps:

(1) Check **Manual Time Sync**.

(2) Click on Set Time text field to get the pop-up calendar.

Figure 6-3 Time Sync Manually

(3) Click [Save] to save the settings.

[NOTE] You can also check **Sync with local time** checkbox to synchronize the time with the time on your computer.

[END]

● **Select the Time Zone**

From the **Time Zone** drop-down menu as shown in Figure 6-4, select the Time Zone in which the speed dome is located.

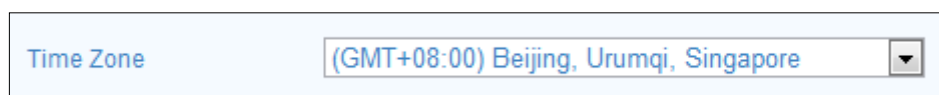| Time Zone	(GMT+08:00) Beijing, Urumqi, Singapore	▼

Figure 6-4 Time Zone Settings

● **Configuring Daylight Saving Time (summer time)**
Steps:
(1) Enter the **DST** config menu by **Configuration > Advanced Configuration > System > DST**
(2) Check **Enable DST** to enable the DST function.
(3) Set the date of the DST period.

(4) Click [Save] to save the settings.

[END]

6.3 Configuring Network Settings

6.3.1 Configuring TCP/IP Settings

Purpose:
TCP/IP settings must be configured correctly before you operate the speed dome over a network. IPv4 and IPv6 are both supported.
Steps:
1. Enter TCP/IP Settings interface:
   Configuration > Basic Configuration > Network > TCP/IP
   Or **Configuration > Advanced Configuration > Network > TCP/IP**

Figure 6-5 TCP/IP Settings

2. Configure the NIC settings, including the **IPv4(IPv6) Address**, **IPv4(IPv6) Subnet Mask** and **IPv4(IPv6) Default Gateway**.

3. Click Save to save the above settings.

NOTE

● If a DHCP server is available, you can check ✓ DHCP to automatically obtain an IP address and other network settings from that server.

● The valid value range of Maximum Transmission Unit(MTU) is 500 ~ 1500. The default value is 1500.

● Multicast sends a stream to the multicast group address and allows multiple clients to acquire the stream at the same time by requesting a copy from the multicast group address. Before utilizing this function, you have to enable the Multicast function on your router and configure the gateway of the network speed dome.

● If a DNS server settings are required for some applications (e.g., sending email), you should properly configure the **Preferred DNS Server** and **Alternate DNS server**.

Figure 6-6 DNS Server Settings

NOTE The router must support the route advertisement function if you select **Route Advertisement** as the IPv6 mode.

END

6.3.2 Configuring Port Settings

Purpose:
If connected to a router and you want to access the speed dome via the Wide Area Network (WAN), you need to forward 3 ports for the speed dome.

Steps:
1. Enter the Port Settings interface:

Configuration > Basic Configuration > Network > Port
Or **Configuration > Advanced Configuration > Network > Port**

HTTP Port	80
RTSP Port	554
HTTPS Port	443
Server Port	8000

Figure 6-7 Port Settings

2. Set the HTTP port, RTSP port and port of the speed dome.
HTTP Port: The default port number is 80.
RTSP Port: The default port number is 554.
HTTPS Port: The default port number is 443.
Server Port: The default port number is 8000.

3. Click [Save] to save the settings.

END

6.3.3 Configuring PPPoE Settings

Purpose:
If you have no router but only a modem, you can use Point-to-Point Protocol over Ethernet (PPPoE) function.

Steps:
1. Enter the PPPoE Settings interface:

Configuration >Advanced Configuration > Network > PPPoE

Figure 6-8 PPPoE Settings

2. Check **Enable PPPoE** checkbox to enable this feature.
3. Enter **User Name**, **Password**, and **Confirm** password for PPPoE access.

NOTE   The User Name and Password should be assigned by your ISP.

4. Click [Save] to save and exit the interface.

END

6.3.4 Configuring DDNS Settings

Purpose:
If your speed dome is set to use PPPoE as its default network connection, you can use the Dynamic DNS (DDNS) for network access.

Before you start:
Registration on the DDNS server is required before configuring the DDNS settings of the speed dome.

Steps:
1. Enter the DDNS Settings interface:
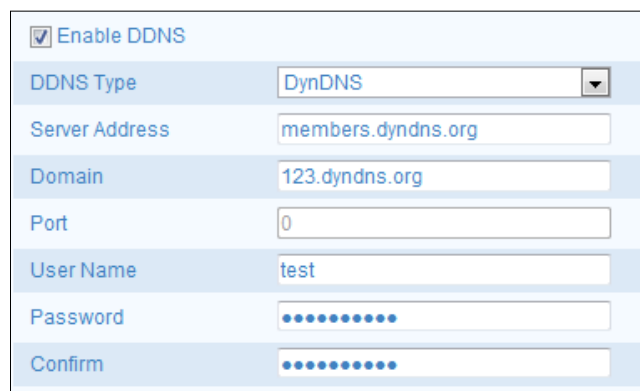   **Configuration > Advanced Configuration > Network > DDNS**

Figure 6-9 DDNS Settings

2. Check the **Enable DDNS** checkbox to enable this feature.
3. Select **DDNS Type**. Three DDNS types are selectable: IPServer, HiDDNS, NO-IP and DynDNS.
    *   **DynDNS:**
        Steps:

(1) Enter **Server Address** of DynDNS (e.g. members.dyndns.org).
(2) In the **Domain** text field, enter the domain name obtained from the DynDNS website.
(3) Enter the **Port** of DynDNS server.
(4) Enter the **User Name** and **Password** registered on the DynDNS website.

(5) Click [Save] to save the settings.

Enable DDNS	
DDNS Type	DynDNS
Server Address	members.dyndns.org
Domain	123.dyndns.org
Port	0
User Name	test
Password	••••••••••
Confirm	••••••••••

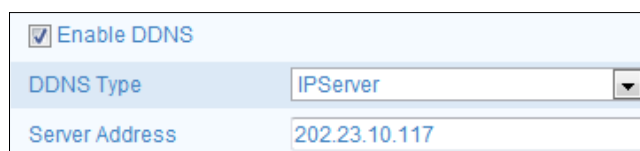Figure 6-10 DynDNS Settings

● **IP Server:**
Steps:
(1) Enter the Server Address of the IP Server.
(2) Click [Save] to save the settings.

NOTE The **Server Address** should be entered with the static IP address of the computer that runs the IP Server software. For the IP Server, you have to apply a static IP, subnet mask, gateway and preferred DNS from the ISP.

Enable DDNS	
DDNS Type	IPServer
Server Address	202.23.10.117

Figure 6-11 IPServer Settings

● **HiDDNS:**
Steps:
(1) Enter the Server Address: www.hiddns.com.
(2) Enter the Domain name of the camera. The domain is the same with the device alias in the HiDDNS server.
(3) Click [Save] to save the settings.

Enable DDNS	
DDNS Type	HiDDNS
Server Address	www.hiddns.com
Domain	8746993896

Figure 6-12 HiDDNS Settings

● **NO-IP:**

Steps:

(1) Enter **Server Address** of NO-IP.

(2) In the **Domain** text field, enter the domain name obtained from the NO-IP website.

(3) Enter the **Port** of NO-IP server.

(4) Enter the **User Name** and **Password** registered on the NO-IP website.

(5) Click ⎡ Save ⎤ to save the settings.

END

6.3.5 Configuring SNMP Settings

Purpose:

You can use SNMP to get speed dome status and parameters related information.

Before you start:

Before setting the SNMP, please use the SNMP software and manage to receive the speed dome information via SNMP port. By setting the Trap Address, the speed dome can send the alarm event and exception messages to the surveillance center.

NOTE The SNMP version you select should be the same as that of the SNMP software.

Steps:

1. Enter the SNMP Settings interface:

   Configuration > Advanced Configuration > Network > SNMP

Figure 6-13 SNMP Settings

2. Check the corresponding version checkbox (Enable SNMPv1 , Enable SNMP v2c ,

    Enable SNMPv3) to enable the feature.

3. Configure the SNMP settings.

    NOTE The configuration of the SNMP software should be the same as the settings you

    configure here.

4. Click Save to save and finish the settings.

END

6.3.6 Configuring 802.1X Settings

Purpose:

The speed dome supports IEEE 802.1X standard.

IEEE 802.1X is a port-based network access control. It enhances the security level of the LAN. When devices connect to this network with IEEE 802.1X standard, the authentication is needed. If the authentication fails, the devices will not connect to the network.

The protected LAN with 802.1X standard is shown as follows:

Figure 6-14 Protected LAN

- Before connecting the Network Camera to the protected LAN, please apply a digital certificate from a Certificate Authority.
- The network camera requests access to the protected LAN via the authenticator (a switch).
- The switch forwards the identity and password to the authentication server(RADIUS server).
- The switch forwards the certificate of authentication server to the network camera.
- If all the information is validated, the switch allows the network access to the protected network.

Steps:

1. Connect the network camera to your PC directly with a network cable.
2. Enter the 802.1X Settings interface:
   Configuration > Advanced Configuration > Network > 802.1X

Figure 6-15 802.1X Settings

3. Check the **Enable IEEE 802.1X** checkbox to enable it.
4. Configure the 802.1X settings, including user name and password.

NOTE The EAP-MD5 version must be identical with that of the router or the switch.

5. Enter the user name and password (issued by the CA) to access the server.

6. Click [Save] to finish the settings.

NOTE The camera reboots when you save the settings.

7. After the configuration, connect the camera to the protected network.

END

6.3.7 Configuring QoS Settings

Purpose:

QoS (Quality of Service) can help solve the network delay and network congestion by configuring the priority of data sending.

Steps:

1. Enter the QoS Settings interface:
    Configuration >Advanced Configuration > Network > QoS

Figure 6-16 QoS Settings

2. Configure the QoS settings, including video / audio DSCP, event / alarm DSCP and Management DSCP.
    The valid DSCP value ranges from 0 to 63. The DSCP value is bigger, the priority is higher.

3. Click [Save] to save the settings.

- Make sure that you enable the QoS function of your network device (such as a router).
- It will ask for a reboot for the settings to take effect.

6.3.8 Configuring FTP Settings

Purpose:
You can set a FTP server and configure the following parameters for uploading captured pictures.

Steps:
1. Enter the FTP Settings interface:
   Configuration >Advanced Configuration > Network > FTP

Figure 6-17 FTP Settings

2. Configure the FTP settings, including server address, port, user name, password, directory and upload type.
   - **Setting the directory in the FTP server for saving files**:
     In the **Directory Structure** field, you can select the root directory, parent directory and child directory.
     - **Root directory**: The files will be saved in the root of FTP server.
     - **Parent directory:** The files will be saved in a folder in FTP server. The name of folder can be defined as shown in following Figure 6-18.

Figure 6-18 Parent Directory

- **Child directory**: It is a sub-folder which can be created in the parent

directory. The files will be saved in a sub-folder in FTP server. The name of folder can be defined as shown in following Figure 6-19.
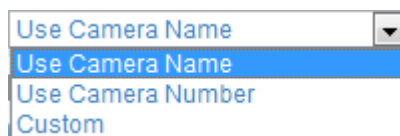

Figure 6-19 Child Directory

● **Upload type:** To enable uploading the captured picture to the FTP server.

3. Click [Save] to save the settings.

NOTE If you want to upload the captured pictures to FTP server, you also have to enable the continuous snapshot or event-triggered snapshot in **Snapshot** interface. For detailed information, please refer to the Section *7.3 Configuring Snapshot Settings*.

END

6.3.9 Configuring UPnP™ Settings

Universal Plug and Play (UPnP™) is a networking architecture that provides compatibility among networking equipment, software and other hardware devices. The UPnP protocol allows devices to connect seamlessly and to simplify the implementation of networks in domestic and corporate environments.

With this function enabled, you don't need to configure port mapping for each port, and the camera is connected to the Wide Area Network via the router.

Steps:

1. Enter the UPnP™ settings interface.
   Configuration >Advanced Configuration > Network > UPnP
2. Check the checkbox to enable the UPnP™ function.
   You can edit the Friendly Name of the speed dome. This name can be detected by corresponding device, such as a router.
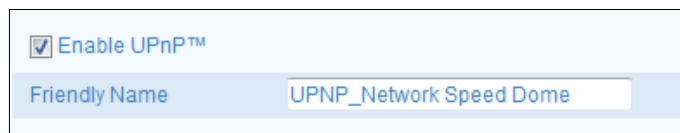

Figure 6-20 Configure UPnP Settings

END

6.3.10 Configuring NAT (Network Address Translation) Settings

Steps:

1. Set the port mapping mode:

   To port mapping with the default port numbers:

   Select | Port Mapping Mode | Auto ▾ |

   To port mapping with the customized port numbers:

   Select | Port Mapping Mode | Manual ▾ |

   And you can customize the value of the port number by yourself.

   ☑ Enable Port Mapping

Port Mapping Mode		Manual ▾		
	Port Type	External Port	External IP Address	Status
☑	HTTP	80	0.0.0.0	Not Valid
☑	RTSP	554	0.0.0.0	Not Valid
☑	Server Port	8000	0.0.0.0	Not Valid

   Figure 6-21 Configure Port Mapping

2. Click [Save] to save the settings.

[END]

6.3.11 Configuring Email Settings

Purpose:
The system can be configured to send an Email notification to all designated receivers if an alarm event is detected, e.g., motion detection event, video loss, tamper-proof, etc.

Before you start:
Please configure the DNS Server settings under **Basic Configuration > Network > TCP/IP** or **Advanced Configuration > Network > TCP/IP** before using the Email function.

Steps:
1. Enter the Email Settings config page:

   Configuration > Advanced Configuration > Network > Email

Figure 6-22 Email Settings

2. Configure the following settings:

   Sender: The name of the email sender.

   Sender's Address: The email address of the sender.

   SMTP Server: The SMTP Server IP address or host name (e.g., smtp.263xmail.com).

   SMTP Port: The SMTP port. The default TCP/IP port for SMTP is 25.

   Enable SSL: Check the checkbox to enable SSL if it is required by the SMTP server.

   Attached Image: Check the checkbox of Attached Image if you want to send emails with attached alarm images.

   Interval: The interval refers to the time between two actions of sending attached pictures.

   Authentication (optional): If your email server requires authentication, check this checkbox to use authentication to log in to this server and enter the login user name and password.

   Receiver: Select the receiver to which the email is sent. Up to 2 receivers can be configured.

   Receiver: The name of the user to be notified.

   Receiver's Address: The email address of user to be notified.

3. Click [Save] to save the settings.

[END]

6.4 Configuring Video and Audio Settings

6.4.1 Configuring Video Settings

Steps:
1. Enter the Video Settings config page:
    Configuration >Basic Configuration > Video / Audio > Video
    Or **Configuration > Advanced Configuration > Video / Audio > Video**

Stream Type	Main Stream(Normal)
Video Type	Video&Audio
Resolution	1280*720P
Bitrate Type	Variable
Video Quality	Medium
Frame Rate	25 fps
Max. Bitrate	2048 Kbps
Video Encoding	H.264
I Frame Interval	50
SVC	OFF

Figure 6-23 Configure Video Settings

2. Select the **Stream Type** of the speed dome to main stream (normal) or sub-stream. The main stream is usually for recording and live viewing with good bandwidth, and the sub-stream can be used for live viewing when the bandwidth is limited. Refer to the Section *6.1 Configuring Local Parameters* for switching the main stream and sub-stream for live viewing.
3. You can customize the following parameters for the selected main stream or sub-stream:
    Video Type:
    Select the stream type to video stream, or video & audio composite stream. The audio signal will be recorded only when the **Video Type** is **Video & Audio**.
    Resolution:
    Select the resolution of the video output.
    Bitrate Type:
    Select the bitrate type to constant or variable.
    Video Quality:
    When bitrate type is selected as **Variable**, 6 levels of video quality are selectable.
    Frame Rate:
    The frame rate is to describe the frequency at which the video stream is updated and it is measured by frames per second (fps). A higher frame rate is advantageous

when there is movement in the video stream, as it maintains image quality throughout.

Max. Bitrate:

Set the max. bitrate to 32~12288Kbps. The higher value corresponds to the higher video quality, but the higher bandwidth is required.

Video Encoding:

The **Video Encoding** standard can be set to H.264 or MJPEG.

I Frame Interval:

Set the I-Frame interval from 2 to 250.

SVC:

SVC(Scalable video coding technology) is for storing video when the bandwidth is limited. To use this function, a specified H.264 encoding storage device is necessary.

4. Click [Save] to save the settings.
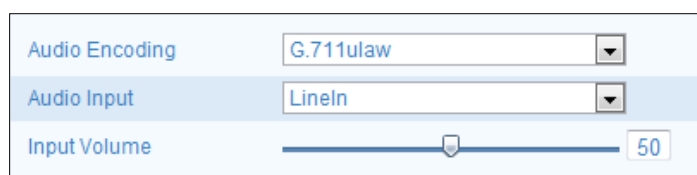
6.4.2 Configuring Audio Settings

Steps:

1. Enter the Audio Settings interface

    Configuration > Basic Configuration > Video / Audio > Audio
    Or **Configuration > Advanced Configuration > Video / Audio > Audio**

Audio Encoding	G.711ulaw
Audio Input	LineIn
Input Volume	50

Figure 6-24 Audio Settings

2. Configure the following settings.
    Audio Encoding: G.711ulaw, G.711alaw, MP2L2 and G.726 selectable.
    Audio Input: If an intercom is connected to the speed dome, you need to set this option to **LineIn**. When a microphone is connected to the speed dome, you need to set this option to **MicIn**.
    Input Volume: Slid the **bar** to turn up/down the volume. The value ranges from 0 to 100.

3. Click [Save] to save the settings.

6.4.3 Configuring ROI Settings

Before you start:

ROI (Region of Interest) encoding is used to enhance the quality of images which are specified in advance.

Steps:

1. Enter the RIO Settings interface
    Configuration > Advanced Configuration > Video / Audio > RIO
2. Select the Stream Type in the dropdown list.
    You can set the ROI function for main stream or sub stream. Select a stream type and then configure the ROI settings.
3. Set the parameters for the Fixed Region.
    The fixed region encoding is the ROI encoding for the manually configured area. And you can choose the Image Quality Enhancing level for ROI encoding, and you can also name the ROI area.
    (1) Select a **Region No.**.
    (2) Check the check box of **Enable** under **Fixed Region**.

    (3) Click Draw Area and draw a red frame in the live view image.

    (4) Adjust the **ROI level** from 1 to 6. The higher the value, the better image quality in the red frame.
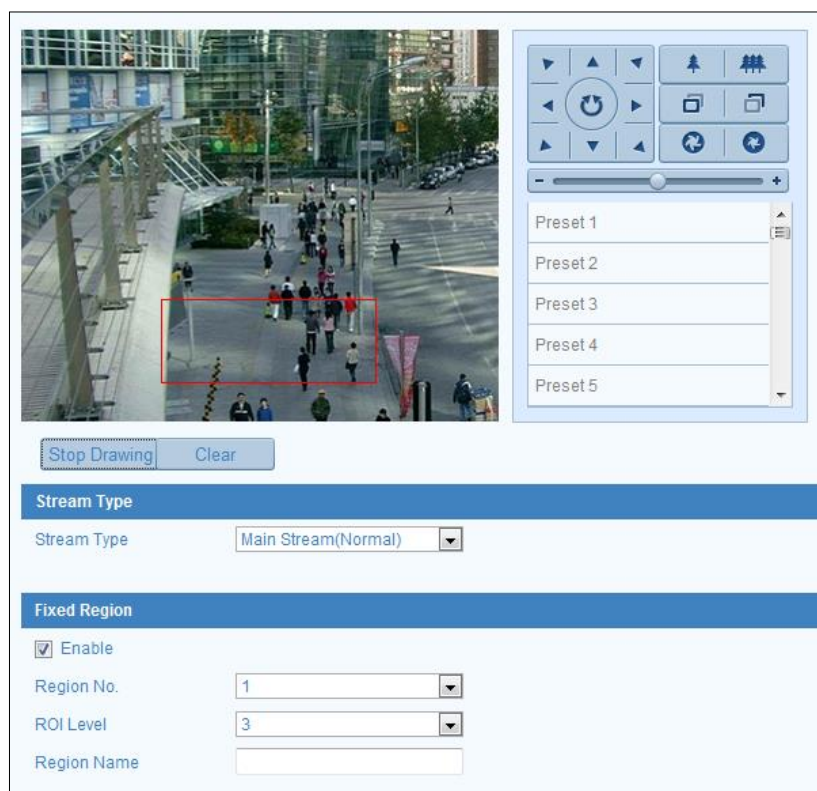   (5) Enter a **Region Name**

Figure 6-25 Region of Interest

4. Click ⬚ Save ⬚ to save the settings.

[END]

6.5 Configuring Image Settings

6.5.1 Configuring Display Settings

Purpose:

You can set the image quality of the speed dome, including brightness, contrast, saturation, sharpness, etc.

[NOTE]

- The parameters in **Display Settings** interface vary depending on the models of speed dome.
- You can double click the live view to enter full screen mode and double click it again to exit.

Steps:

1. Enter the Display Settings interface:

   Configuration > Basic Configuration> Image> Display Settings

   Or **Configuration > Advanced Configuration> Image> Display Settings**

2. Set the image parameters of the speed dome.

[END]

Figure 6-26 Display Settings

Image Adjustment

● **Brightness**

This feature is used to adjust brightness of the image. The value ranges from 0 to 100.

● **Contrast**

This feature enhances the difference in color and light between parts of an image. The value ranges from 0 to 100.

● **Saturation**

This feature is used to adjust color saturation of the image. The value ranges from 0 to 100.

● **Sharpness**

Sharpness function enhances the detail of the image by sharpening the edges in the image. The value ranges from 0 to 100.

Exposure Settings

● **Exposure Mode**

The **Exposure Mode** can be set to **Auto, Iris Priority, Shutter Priority, Manual.**

◆ Auto:

The iris, shutter and gain values will be adjusted automatically according to the brightness of the environment.

◆ Iris Priority:

The value of iris needs to be adjusted manually. The shutter and gain values will be adjusted automatically according to the brightness of the environment.

◆ Shutter Priority:

The value of shutter needs to be adjusted manually. The iris and gain values will be adjusted automatically according to the brightness of the environment.

◆ Gain Priority:

The value of gain needs to be adjusted manually. The shutter and iris values will be adjusted automatically according to the brightness of the environment.

◆ Manual:

In **Manual** mode, you can adjust the values of **Gain**, **Shutter**, **Iris** manually.

NOTE This function varies depending on the models of speed dome.

● **Limit Gain**

This feature is used to adjust gain of the image. The value ranges from 0 to 100.

● **Slow Shutter**

This function can be used in underexposure condition. It lengthens the shutter time to ensure full exposure.

Focus Settings

- **Focus Mode**

    The **Focus Mode** can be set to **Auto**, **Manual**, **Semi-auto**.

    ◆ Auto**:**

    The speed dome focuses automatically all the time.

    ◆ Semi-auto:

    The speed dome focuses automatically once after panning, tilting and zooming.

    ◆ Manual**:**

    In **Manual** mode, you need to use [⬚ | ⬚] on the control panel to focus

    manually.

- **Min. Focus Distance**

This function is used to limit the minimum focus distance. The value can be set to 1.5m, 3m, 6m, 10cm and 50cm.

NOTE The minimum focus value varies depending on the models of speed dome.

Day/Night Switch

- **Day/Night Switch**

    The **Day/Night Switch** mode can be set to **Auto**, **Day** and **Night**.

    ◆   **Auto**:

    In **Auto** mode, the day mode and night mode will switch automatically according to the light condition of the environment. The switching sensitivity can be set to **Low**, **Normal**, **High**.

    ◆   **Day**:

    In **Day** mode, the speed dome displays color image. It is used for normal lighting conditions.

    ◆   **Night**:

    In **Night** mode, the image is black and white. **Night** mode can increase the sensitivity in low light conditions.

- **IR Light Mode**

IR light mode can be set to **Auto** and **Manual**.

    ◆   **Auto:**

    The brightness of the infrared light will be adjusted automatically. **IR Light Sensitivity** value ranges from 0 to 100. **Trigger Mode** can be set to **Camera** or **Photosensitive**.

    ◆   **Manual:**

    You need to adjust the brightness value of infrared light manually. **IR Light Bright** value ranges from 0 to 100.

    NOTE

Only the IR speed dome models support IR Light Mode.

NOTE

● When the **IR Light Mode** is auto, the day/night mode is adjusted automatically.
● When the **IR Light Mode** is manual and the **IR Light Bright** is 0, you can set the day/night mode manually.
● When the **IR Light Mode** is manual and the **IR Light Bright** is not 0, the night mode is set as the default mode. Manually setting the day/night mode is invalid.

Backlight Settings

● **BLC**

If there's a bright backlight, the subject in front of the backlight appears silhouetted or dark. Enabling the **BLC**(back light compensation) function can correct the exposure of the subject. But the backlight environment is washed out to white.

● **WDR (Wide Dynamic Range)**

The wide dynamic range (WDR) function helps the camera provide clear images even under back light circumstances. When there are both very bright and very dark areas simultaneously in the field of view, WDR balances the brightness level of the whole image and provide clear images with details.
You can enable or disable the WDR function.

● **HLC**

HLC (High Light Compensation) makes the camera identify and suppress the strong light sources that usually flare across a scene. This makes it possible to see the detail of the image that would normally be hidden.

White Balance

The **White Balance** mode can be set to **Auto**, **MWB**, **Outdoor**, **Indoor**, **Fluorescent Lamp**, **Sodium Lamp** and **Auto-Track**.

◆ **Auto**:

In **Auto** mode, the camera retains color balance automatically according to the current color temperature.

◆ **Manual White Balance:**

In **MWB** mode, you can adjust the color temperature manually to meet your own requirements as displayed in Figure 6-27.

Figure 6-27 Manual White Balance

◆ **Outdoor**

You can select this mode when the speed dome is installed in outdoor environment.

◆ **Indoor**

You can select this mode when the speed dome is installed in indoor environment.

◆ **Fluorescent Lamp**

You can select this mode when there are fluorescent lamps installed close to the speed dome.

◆ **Sodium Lamp**

You can select this mode when there are sodium lamps installed near the speed dome.

◆ **Auto-Track**

In **Auto-Track** mode, white balance is continuously being adjusted in real-time according to the color temperature of the scene illumination.

NOTE This function varies depending on the models of speed dome.

Image Enhancement

● **3D Digital Noise Reduction**

You can enable or disable the 3D **Digital Noise Reduction** function. The level ranges from 0 to 100.

NOTE This function varies depending on the models of speed dome.

Video Adjustment

● **Mirror**

If you turn the **MIRROR** function on, the image will be flipped. It is like the image in the mirror. The flip direction can be set to OFF or CENTER.

NOTE This function varies depending on the models of speed dome.

● **Video Standard**

You can set the **Video Standard** to 50hz(PAL) or 60hz(NTSC) according to the video system in your country.

NOTE This function varies depending on the models of speed dome.

● **Capture Mode**

You can disable this function or set the value as 1280*720@30fps or 1280*960@30fps.

Other

● **Lens Initialization**

The lens operates the movements for initialization when you check the check box of **Lens Initialization.**

● **Zoom Limit**

You can set **Zoom Limit** value to limit the maximum value of zooming. The value can be set to 20, 40, 80, 160 and 320.

● **Local Output**

You can select the output mode to ON or OFF.

[NOTE] This function varies depending on the models of speed dome.

6.5.2 Configuring OSD Settings

Purpose:

The speed dome supports following on screen displays:

Zoom: Displays the amount of magnification.

Direction: Displays panning and tilting direction, with the format of PXXX TXXX. The XXX following P indicates the degrees in pan direction, while the XXX following T indicates the degrees in tilt position.

Time: Supports for time display.

Preset Title: Identifies the preset being called.

Camera Name: Identifies the name of speed dome.

You can customize the on screen display of time.

Steps:

1. Enter the OSD Settings config page:

   Configuration > Advanced Configuration > Image > OSD Settings

Figure 6-28 OSD Settings

2. Check the corresponding checkbox to select the display of speed dome name, date or week if required.
3. Edit the speed dome name in the text field of **Camera Name**.
4. Select from the drop-down list to set the time format, date format and display mode.
5. You can use the mouse to click and drag the text to adjust the OSD position.

6. Click [Save] to activate the above settings.

📖 END

6.5.3 Configuring Text Overlay Settings

Purpose:
You can customize the text overlay.
Steps:
1. Enter the Text Overlay Settings interface:
    Configuration > **Advanced Configuration** > **Image** > **Text Overlay**
2. Check the checkbox in front of textbox to enable the on-screen display.
3. Input the characters in the textbox.

4. Use the mouse to click and drag the red text frame [Text] in the live view window

    to adjust the text overlay position.

5. Click [Save].

    NOTE There are up to 4 text overlays configurable.

Figure 6-29 Text Overlay Settings

📖 END

6.6 Configuring and Handling Alarms

Purpose:
This section explains how to configure the network speed dome to respond to alarm events, for example motion detection, external alarm input, video loss, tamper-proof and exception. These events can trigger the alarm actions, such as Notify Surveillance

Center, Send Email, Trigger Alarm Output, etc.

For example, when an external alarm is triggered, the network speed dome sends a notification to an e-mail address.

6.6.1 Configuring Motion Detection

Purpose:

Motion detection is a feature that can trigger alarm actions when motion occurrs in the scene.

Steps:

1. Set the Motion Detection Area.

    Steps:

    (1) Enter the motion detection settings interface

        Configuration > Advanced Configuration> Events > Motion Detection

    (2) Check the checkbox of **Enable Motion Detection**.

Figure 6-30 Enable Motion Detection

(3) Click [Draw Area]. Click and drag the mouse on the live video image to draw a motion detection area.

> **NOTE** You can draw up to 8 motion detection areas on the same image.

(4) Click [Stop Drawing] to finish drawing.

> **NOTE** You can click [Clear All] to clear all of the areas.

(5) Move the slider [Sensitivity ──── 0] to set the sensitivity of the detection.

2. Set the Arming Schedule for Motion Detection.
   Steps:

   (1) To edit the arming schedule as shown in Figure 6-32, click [Edit] in Figure 6-31.

Figure 6-31 Arming Schedule

   (2) Select the day you would like to set the arming schedule up on, as shown in Figure 6-32.
   (3) Click [icon] to set the time period for the arming schedule.

   (4) After you set the arming schedule, you can click [Copy] to copy the schedule to other days (Optional).

   (5) Click [OK] to save the settings.

[NOTE] The time of each period can't be overlapped. Up to 4 periods can be configured for each day.

Figure 6-32 Arming Time Schedule

3. Set the Alarm Actions for Motion Detection.
   You can specify the linkage method when an event occurs. The following contents explain how to configure the different types of linkage method.

Figure 6-33 Linkage Method

Check the checkbox to select the linkage method. Notify surveillance center, send email, upload to FTP, trigger channel and trigger alarm output are selectable.

● **Notify Surveillance Center**
   Send an exception or alarm signal to remote management software when an event occurs.

● **Send Email**
   Send an email with alarm information to a user or users when an event occurs.

   NOTE To send the Email when an event occurs, please refer to Section **6.3.10 Configuring Email Settings** / Email parameters.

● **Upload to FTP**
   Capture the image when an alarm is triggered and upload the picture to a

FTP server.

![NOTE] You need a FTP server and set FTP parameters first. Refer to Section **6.3.8**

Configuring FTP Settings for setting FTP parameters.

● **Trigger Channel**

Record a video when an event occurs.

![NOTE] You have to set up the recording schedule for this function. Please refer to

Section **7.2 Configuring Recording Schedule** for setting up the recording schedule.

● **Trigger Alarm Output**

Trigger one or more external alarm outputs when an event occurs.

![NOTE] To trigger an alarm output when an event occurs, please refer to Section **6.6.5**

Configuring Alarm Output to set the alarm output parameters.

![END]

6.6.2 Configuring Video Tampering Alarm

Purpose:

You can configure the speed dome to trigger an alarm action when the lens is covered.

Steps:

1. Enter the video tampering Settings config page:

    Configuration > Advanced Configuration > Events > Video Tampering

Figure 6-34 Tampering Alarm

2. Check **Enable Video Tampering** checkbox to enable the tampering detection.

3. Set the tampering area. Refer to *Step 1 Set the Motion Detection Area* in Section *6.6.1 Configuring Motion Detection*.

4. Click [Edit] to edit the arming schedule for tampering. The arming schedule configuration is the same as the setting of the arming schedule for motion detection. Refer to *Step 2 Set the Arming Schedule for Motion Detection* in Section *6.6.1 Configuring Motion Detection*.

5. Check the checkbox to select the linkage method taken for the tampering. Notify surveillance center, send email and trigger alarm output are selectable. Please refer to *Step 3 Set the Alarm Actions for Motion Detection* in Section *6.6.1 Configuring Motion Detection*.

6. Click [Save] to save the settings.

[END]

6.6.3 Handling Exception

The exception type can be HDD full, HDD error, network disconnected, IP address conflicted and illegal login to the speed domes.

Steps:

1. Enter the Exception Settings interface:
    Configuration > Advanced Configuration> Events > Exception

2. Check the checkbox to set the actions taken for the Exception alarm. Refer to *Step 3 Set the Alarm Actions Taken for Motion Detection* in Section *6.6.1 Configuring Motion Detection*.

Linkage Method	
Normal Linkage	Other Linkage
☐ Notify Surveillance Center	Trigger Alarm Output ☐ Select All
☐ Send Email	☐ A->1

Figure 6-35 Exception Settings

3. Click [Save] to save the settings.

[END]

Chapter 7 Record Settings

Before you start:

To configure the record settings, please make sure that you have a network storage device within the network or a Micro SD card inserted into your speed dome.

7.1 Configuring NAS Settings

Before you start:

The network disk should be available within the network and properly configured to store the recorded files, log files, etc.

Steps:

1. Add the network disk
   (1) Enter the NAS (Network-Attached Storage) Settings interface:

      Configuration > Advanced Configuration > Storage > NAS

   (2) Select the NAS type as NFS or SMB/CIFS. If you select SMB/CIFS, you need to enter the User Name and Password.

HDD No.	Type	Server Address	File Path
1	NAS		
	Mounting Type NFS ▼	User Name	Password

Figure 7-1 Select NAS Type

   (3) Enter the IP address of the network disk. The default NFS storage format of file path is */dvr/test*, and the default SMB/CIFS storage format of file path is */test*.

HDD No.	Type	Server Address	File Path
1	NAS	10.7.1.200	/dvr/smz_2
2	NAS		
3	NAS		
4	NAS		
5	NAS		
6	NAS		
7	NAS		
8	NAS		

Figure 7-2 Add Network Disk

NOTE The network disk file path name share is user-defined while creating the DVR network storage. Please refer to the User Manual of the NAS for creating the file path.

   (4) Click [Save] to add the network disk.

NOTE After saving the settings successfully, you will need to reboot the speed dome to activate the settings.

2. Initialize the added network disk.

(1) Enter the HDD Settings interface (**Advanced Configuration > Storage > Storage Management**), in which you can view the capacity, free space, status, type and property of the disk.

(2) If the status of the disk is **Uninitialized** as shown in Figure 7-3, check the disk and click [Format] to start initializing the disk.

HDD Device List						Format
☐ HDD No.	Capacity	Free space	Status	Type	Property	Progress
☐ 9	20.00GB	0.00GB	Uninitialized	NAS	R/W	

Figure 7-3 Initialize Disk

HDD Device List						Format
☑ HDD No.	Capacity	Free space	Status	Type	Property	Progress
☑ 9	20.00GB	0.00GB	Uninitialized	NAS	R/W	
88%						

Figure 7-4 Initializing

When the initialization completed, the status of disk will become **Normal** as shown in Figure 7-5**.**

HDD Device List						Format
☐ HDD No.	Capacity	Free space	Status	Type	Property	Progress
☐ 9	20.00GB	19.75GB	Normal	NAS	R/W	

Figure 7-5 View Disk Status

NOTE

● Up to 8 NAS disks can be connected to the speed dome.

● To initialize and use the SD card after inserting it to the speed dome, please refer to the steps of NAS disk initialization.

END

7.2 Configuring Recording Schedule

Purpose:

There are two recording settings for the speed domes: manual recording and scheduled recording. For the manual recording, refer to Section *4.4 Recording and Capturing Pictures Manually*. In this section, you can follow the instructions to configure the scheduled recording. By default, the record files of scheduled recording are stored on the SD card (if supported) or in the network disk.

Steps:

1. Enter the Record Schedule Settings interface:
   Configuration > Advanced Configuration> Storage > Record Schedule

Figure 7-6 Recording Schedule Interface

2. Check the checkbox **Enable Record Schedule** to enable scheduled recording.
3. Set the record parameters of the speed dome.

Figure 7-7 Record Parameters

● **Pre-record:** The time you set to start recording before the scheduled time or the event. For example, if an alarm triggers recording at 10:00, and the pre-record time is set as 5 seconds, the speed dome starts to record at 9:59:55. The Pre-record times can be configured as 5 s, 10 s, 15 s, 20 s, 25 s, 30 s or not limited.

NOTE The pre-record time changes according to the video bitrate.

● **Post-record:** The time you set to stop recording after the scheduled time or the event. For example, if an alarm triggered recording ends at 11:00, and the post-record time is set as 5 seconds, the speed dome records until 11:00:05. The Post-record time can be configured as 5 s, 10 s, 30 s, 1 min, 2 min, 5 min or 10 min.

● **Overwrite**: If enabled when the HDD is full, it overwrites the oldest record files automatically.

NOTE The Pre-record and Post-record parameters vary depending on the speed dome model.

4. Click [Edit] to edit the record schedule.

Figure 7-8 Record Schedule

5. Select the day to set the record schedule.
    (1) Set all-day record or segment record:
    ♦   If you want to configure all-day recording, please check **All Day** checkbox.
    ♦   If you want to record in different time slots, check the **Customize** checkbox.
        Set the **Start Time** and **End Time.**

    NOTE   The time of each segment can't be overlapped. Up to 4 segments can be
    configured.

    (2) Select a **Record Type**. The record type can be Normal, Motion Detection,
        Alarm, Motion | Alarm, Motion & Alarm.
    ♦   **Normal**
        If you select **Normal**, the video will be recorded automatically according to
        the time of the schedule.
    ♦   **Record Triggered by Motion Detection**
        If you select **Motion Detection**, the video will be recorded when the motion
        is detected.
        Please refer to the *Step **1 Set the Motion Detection Area** in the* Section ***6.6.1***
        Configuring Motion Detection.
    ♦   **Record Triggered by Alarm**
        If you select **Alarm**, the video will be recorded when the alarm is triggered
        via the external alarm input channels.
        Please refer to Section ***6.6.4 Configuring External Alarm Input***.
    ♦   **Record Triggered by Motion & Alarm**
        If you select **Motion & Alarm**, the video will be recorded when the motion
        is detected and alarm are triggered at the same time.
        Please configure the settings on the **Motion Detection** and **Alarm Input**
        Settings interfaces. Please refer to Section ***6.6.1*** and Section ***6.6.4*** for

detailed information.

♦ **Record Triggered by Motion | Alarm**

If you select **Motion | Alarm**, the video will be recorded when the external alarm is triggered or the motion is detected.

Please configure the **Motion Detection** and **Alarm Input Settings**. Please refer to Section **6.6.1** and Section **6.6.4** for detailed information.

(3) Check ☐ Select All and click Copy to copy settings of this day accross the whole week

(4) Click OK to save the settings and exit the **Edit Record Schedule** page.

6. Click Save to save the settings.

[END]

7.3 Configuring Snapshot Settings

Purpose:

To configure the scheduled snapshot and event-triggered snapshot. These can be uploaded to an FTP server.

Basic Settings

Steps:

1. Enter the Snapshot Settings config page:
    Configuration > Advanced Configuration > Storage > Snapshot
2. Check **Enable Timing Snapshot** to enable continuous snapshot. Check **Enable Event-triggered Snapshot** to enable event-triggered snapshot.
3. Select the quality of the snapshot.
4. Set the time interval between snapshots.
5. Click Save to save the settings.

[END]

Uploading to FTP

[NOTE] Please make sure that the FTP server is online.

● To upload continuous snapshots to FTP

Steps:

1) Configure the FTP settings and check ☑ Upload Picture in FTP Settings page. Please refer to Section **6.3.8 Configuring FTP Settings** for more details.
2) Check **Enable Timing Snapshot**.

END

● Upload event-triggered snapshots to FTP

Steps:

1) Configure the FTP settings and check ☑ Upload Picture in FTP Settings page. Please refer to Section *6.3.8 Configuring FTP Settings* for more details.

2) Check ☑ Upload to FTP in Motion Detection Settings or Alarm Input config pages. Please refer to *Step 3 Set the Alarm Actions Taken for Motion Detection* in Section *6.6.1 Configuring Motion Detection, or Step 4 Configuring External Alarm Input* in Section *6.6.1 Configuring Motion Detection*.

3) Check **Enable Event-triggered Snapshot**.

Figure 7-9 Snapshot Settings

END

Chapter 8 Playback

Purpose:

This section explains how to view the recorded video files stored on the network disks or SD card.

Task 1: To play back the video files

Steps:

1. Click [Playback] on the menu bar to enter playback interface.

Figure 8-1 Playback Interface

2. Select the required date and click [Search].

Figure 8-2 Search Video

3.   Click ▶ to play the video files found on this date.

[END]

The toolbar on the bottom of Playback interface can be used to control playback.

Figure 8-3 Playback Toolbar

Table 8-1 Description of the buttons

Button	Operation	Button	Operation
▶/ ‖	Play/ Pause	📷	Capture a picture
✂/✂	Start/Stop clipping video files	■	Stop
🔊——— / 🔇——	Audio on and adjust volume/Mute	◀◀	Speed down
▶▶	Speed up		Download video files
	Download captured pictures	‖▶	Playback by frame

Drag the progress bar with the mouse to go to a playback point. You can also input the time and click ➡ to go to a playback point. Click − + to zoom out/in the progress bar.

Figure 8-4 Set Playback Time

Figure 8-5 Progress Bar

Time bar recording modes are displayed below.

Figure 8-6 Video Types

Task 2: To download the video files

Steps:

1.   Click ![icon] on the playback page. A pop-up menu is displayed in Figure 8-7.

2.   Set the start time and end time. Click ![Search]. The requested video files are displayed on the left.

☐	No.	File Name	File Date	File Size	Progress	

All Type ▼
Start Time
2014-07-15 00:00:00
End Time
2014-07-15 23:59:59
🔍 Search
📥 Download

Figure 8-7 Video Downloading interface

3.   Check the ☑ video files that you want to download.

4.   Click ![Download] to download the video files.

![END]

![NOTE]

- The progress status **Progress 83%** is displayed.
- You can click ![Stop] to stop the download.

Task 3: To download the captured pictures

Steps:

1.   Click ![icon] on the playback page.

2.   Set the start time and end time. Click ![Search]. The picture files are listed on the left.

3.   Check ☑ the files that you want to download.

4.   Click ![Download] to download the files.

![END]

Chapter 9 Log Search

Purpose:

The speed dome log can be reviewed and downloaded.

Before you start:

Please configure network storage for the speed dome or insert an SD card into the speed dome.

Steps:

1. Click [Log] on the menu bar to enter log searching page.

Figure 9-1 Log Searching Interface

2. Set the log conditions to specify the search, Major Type, Minor Type, Start Time and End Time as shown in Figure 9-2.

3. Click [Search]. The required log files will be displayed on the **Log** page.

Figure 9-2 Log Searching

4. To export the log files, click [Save Log] to save the files in your computer.

Chapter 10 Others

10.1 Managing User Accounts

Enter the User Management page**:**
Configuration >**Basic Configuration**> **Security** > **User**
Or **Configuration**> **Advanced Configuration**> **Security** > **User**
The **admin** user has the authority to create, edit or delete accounts. Up to 32 user accounts can be created.

Figure 10-1 User Information

● Add a User

Steps:

1. Click [Add] to add a new user.

2. Input the **User Name**, **Level** and input **Password**.

    [NOTE] The level indicates the permissions for the user. You can define the user as **Operator** or **User**.

Figure 10-2 Add a User

3. In the **Basic Permission** field and **Camera Configuration** field, you can check or

uncheck the permissions for the new user.

4. Click [OK] to add the new user.

[END]

● Modify a User

Steps:

1. Select the user from the list and click [Modify].

2. Modify the **User Name**, **Level** or **Password**.
3. In the **Basic Permission** field and **Camera Configuration** field, you can check or uncheck the permissions.

4. Click [OK] to finish the user modification.

Figure 10-3 Modify a User

[END]

● Delete a User

Steps:

1. Left-click the user name you want to delete and click [Delete].

2. Click [OK] on the pop-up box to delete the user.
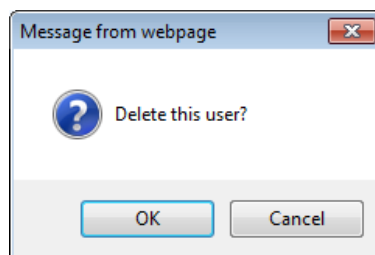
Figure 10-4 Delete a User

10.2 Configuring RTSP Authentication

Purpose:
You can specifically secure the live view data stream.
Steps:
1. Enter the Authentication interface**:**
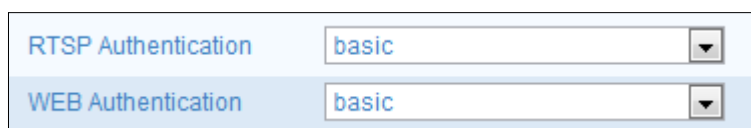   **Configuration**> **Advanced Configuration**> **Security > Authentication**

Figure 10-5 Authentication

2. Select **RTSP Authentication** type **basic** or **disable** from the drop-down list to enable or disable the RTSP authentication.
   Select the **WEB Authentication** type **basic** or **digest** in the drop-down list to set the WEB authentication.

3. Click [Save] to save the settings.

10.3 Configuring Anonymous Visit

When you enable this function, users can log into the camera without entering a username and password.
In login interface, check the **Anonymous** checkbox and click **Login** to enter the camera as shown in Figure 10-7.
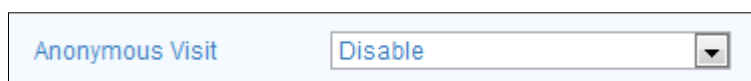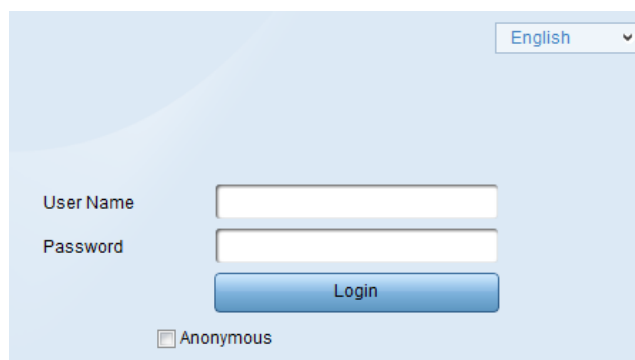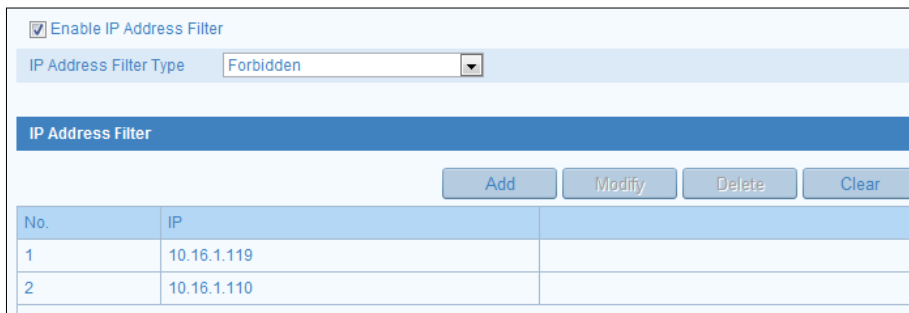

Figure 10-6 Anonymous Login

Figure 10-7 Login Interface

10.4 Configuring IP Address Filter

With this function on, the camera will allow certain IP addresses access to log in or not.

Filter Type	Description
Forbidden	Forbid the IP addresses added in the **IP Address Filter** interface to log in.
Allowed	Allow only the IP addresses added in the **IP Address Filter** interface to log in.

Figure 10-8 IP Address Filter

10.5 Configuring Security Service Settings

Steps:

1. Enter the Security Service interface:
    Configuration> **Advanced Configuration**> **Security** > **Security Service**

Figure 10-9 Security Service

2. Check the checkbox to enable the corresponding function.
    Enable Telnet: Telnet is a network protocol used on the Internet or local area networks to provide a bidirectional interactive text-oriented communication facility using a virtual terminal connection.
    Enable SSH: Enabling SSH (Secure Shell) function is to encrypt and compress the data and to reduce the transmission time.

10.6 Viewing Device Information

Enter the Device Information page:

Configuration > **Basic Configuration**> **System** > **Device Information**

Or **Configuration** > **Advanced Configuration**> **System** > **Device Information**

In the **Device Information** page, you can edit the Device Name.
Other information of the network speed dome, such as Model, Serial No., Firmware Version, Encoding Version, Number of Channels, Number of HDDs, Number of Alarm Input and Number of Alarm Output are displayed. This information cannot be modified.

Basic Information	
Device Name	IP DOME
Device No.	88
Model	XX-XXXXXXX-X
Serial No.	XX-XXXXXXX-XXXXXXXXXXXXXXXXXXXX
Firmware Version	Vx.x.x build xxxxxx
Encoding Version	Vx.x build xxxxxx
Number of Channels	1
Number of HDDs	1
Number of Alarm Input	2
Number of Alarm Output	1

Figure 10-10 Device Information

10.7 Maintenance

10.7.1 Rebooting the Speed Dome

Steps:
1. Enter the Maintenance page:
    Configuration > **Basic Configuration**> **System** > **Maintenance**
    Or **Configuration** > **Advanced Configuration**> **System** > **Maintenance:**

2. Click [Reboot] to reboot the network speed dome.

Reboot

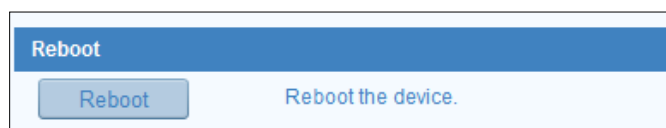| Reboot | Reboot the device. |

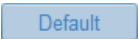Figure 10-11 Reboot the Device

[END]

10.7.2 Restoring Default Settings

Steps:
1. Enter the Maintenance page:
    Configuration > **Basic Configuration**> **System** > **Maintenance**
    Or **Configuration** > **Advanced Configuration**> **System > Maintenance**

2. Click [Restore] or [Default] to restore or default the settings.

[NOTE] Clicking [Default] restores all the parameters to default settings including the IP address and user information.

Default

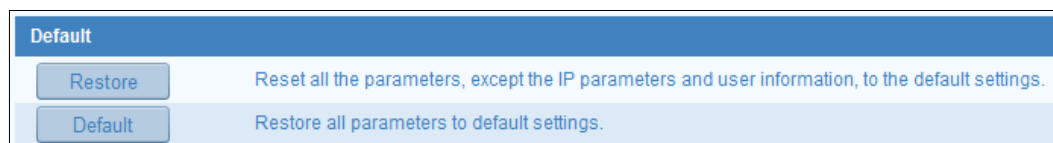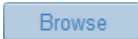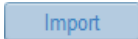| Restore | Reset all the parameters, except the IP parameters and user information, to the default settings. |
| Default | Restore all parameters to default settings. |

Figure 10-12 Restore Default Settings
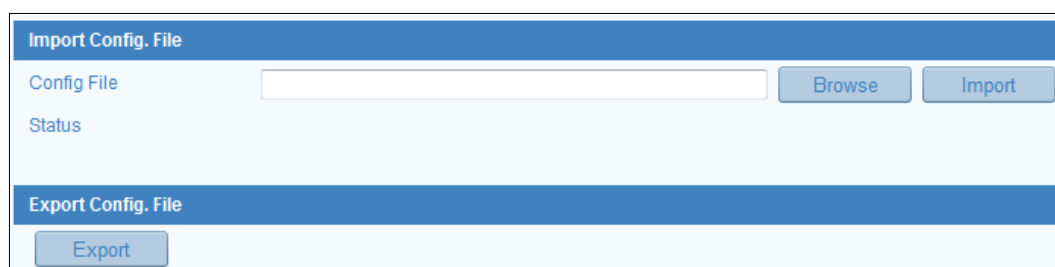
[END]

10.7.3 Importing/Exporting Configuration File

Steps:
1. Enter the Maintenance page:
    Configuration > **Basic Configuration**> **System** > **Maintenance**
    Or **Configuration** > **Advanced Configuration**> **System > Maintenance**

2. Click [Browse] to select the local configuration file and then click [Import] to start importing the file.

    [NOTE] You need to reboot the speed dome after importing configuration file.

3. Click [Export] to save the configuration file on the local storage**.**

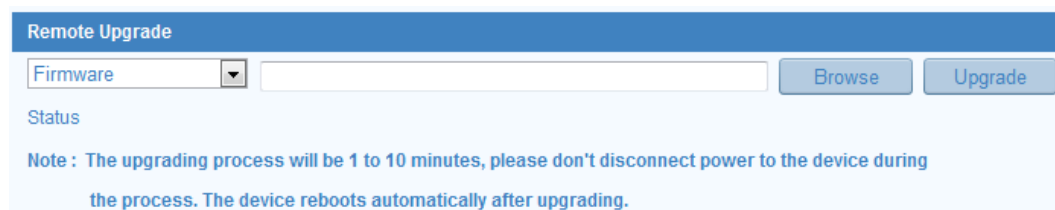Figure 10-13 Import/Export Configuration File

10.7.4 Upgrading the System

Steps:
1. Enter the Maintenance page:
   Configuration > **Basic Configuration**> **System** > **Maintenance**
   Or **Configuration** > **Advanced Configuration**> **System** > **Maintenance**

2. Click ▢ Browse ▢ to select the local upgrade file and then click ▢ Upgrade ▢ to start the remote upgrade.

 The upgrading process will take 1 to 10 minutes. Please do not disconnect power from the speed dome during this process. The speed dome will automatically reboot after the upgrade.

Figure 10-14 Remote Upgrade